June 17, 2019

Marlene Dortch, Secretary
Federal Communications Commission
445 12th St., S.W.
Room 2-B450
Washington, DC 20554

RE: Ex Parte Meetings in Docket 19-158

Dear Ms. Dortch:

In accordance with the requirements of the Commission's regulations, 47 C.F.R. Section 1.1206, Radio Physics Solutions is submitting this letter notifying your office of its ex parte meetings with:

June 13, 2019:
Erin McGrath – Office of Commissioner O'Rielly
Aaron Goldberger – Office of Chairman Pai
Will Adams – Office of Commissioner Carr
Umair Javed – Office of Commissioner Rosenworcel

And

June 14, 2019:
William Davenport – Office of Commissioner Starks
Michael Carowitz – Office of Chairman Pai (only Steve Clark and Anne Cortez attended)

At each meeting, Radio Physics Solutions was represented by its CTO Steve Clark, consultant Jeff Muller, counsel Anne Cortez of Washington Federal Strategies, and counsel Greg Kunkle of Keller and Heckman.

The purpose of the meetings was to present information on the Radio Physics Stand Off Threat Detection System, which is the subject of a Petition for Waiver of the Commission's Rules, Docket Number 19-158. A copy of the presentation given to each of the legal advisors is attached to this letter. These meetings were arranged to answer questions that the Commissioners or their staffs might have about the technology and how it could be used if the Petition for Waiver were granted. This letter is being submitted to the docketed proceeding.

Sincerely,

Anne E. Cortez, Esq.
On behalf of Radio Physics Solutions

Enclosure: Radio Physics Presentation

Cc: Erin McGrath, via e-mail
Aaron Goldberger, via e-mail
Will Adams, via e-mail
Umair Javed, via e-mail
William Davenport, via e-mail
Michael Carowitz, via e-mail
Jeff Muller
Greg Kunkle
Gary King, CEO, RPS

RADIO PHYSICS

Aiming to prevent active shooters / terror attacks

For: Federal Communications Commission
By: Dr. Steve Clark, CTO
Date: 13-14 June, 2019

Problem - Motivation

On a daily basis, people are being killed or injured by individuals wishing to commit harm in public spaces.

Current security systems do not provide advance warning from a distance if a person is concealing weapons or threats, including bombs, guns or knives.

Suite for multiple areas of vulnerability

Urban transport

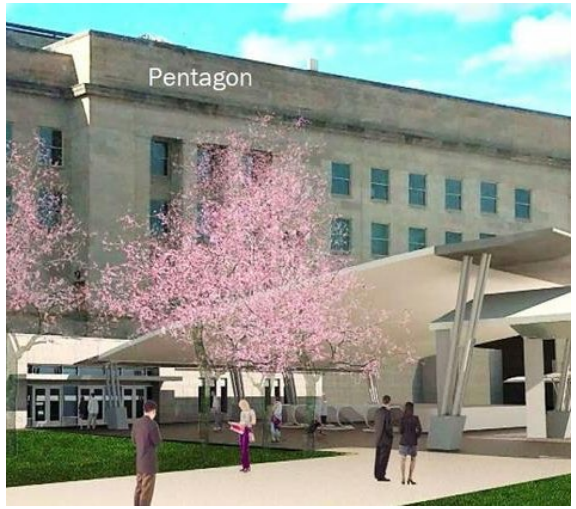
Airport entrances

Religious sites

Schools and campuses

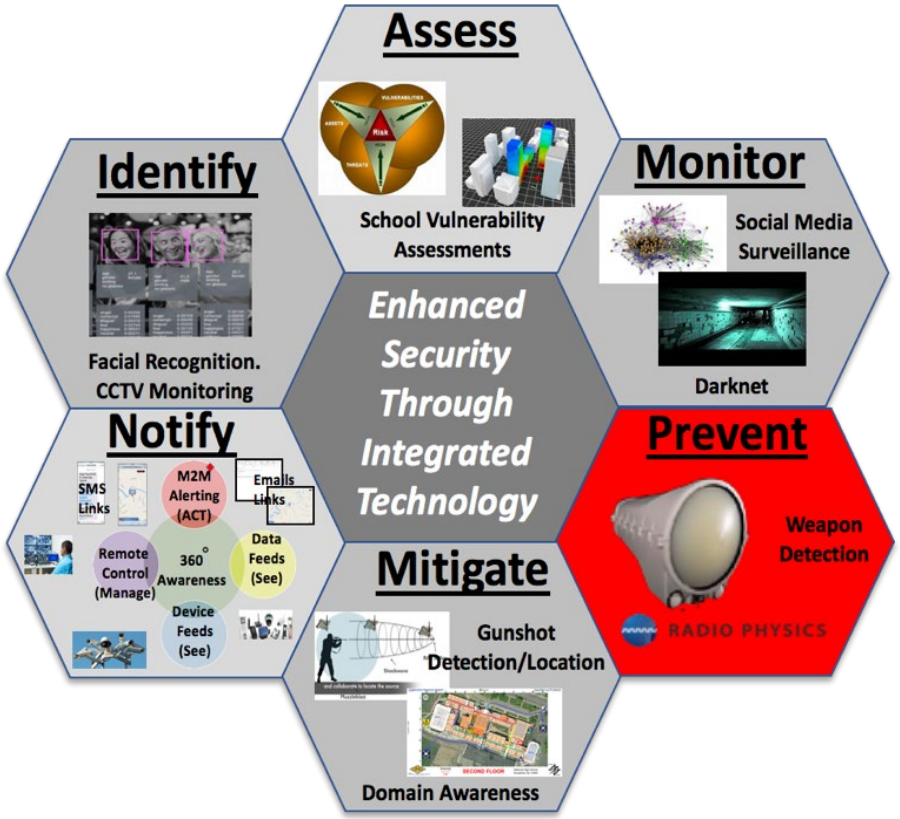
Monuments

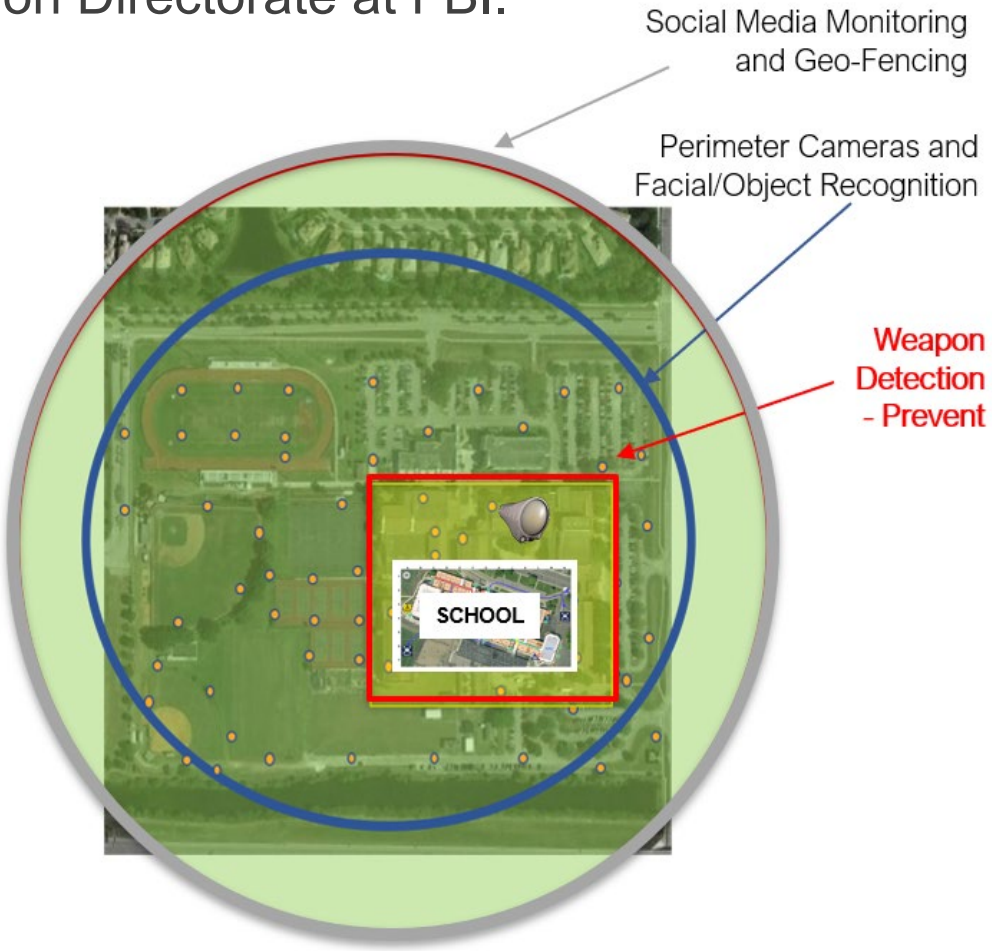
Gov / Military buildings



Case Study: Safe-in-School

SAFE-IN-SCHOOL is an initiative designed to address the threats facing US schools by enhancing security through the integration of technology, **and is enabled by Radio Physics.** The initiative is promoted by Jeff Muller, previously Executive of chemical, biological, radiological, nuclear and explosives at Interpol and Executive of the Weapons of Mass Destruction Directorate at FBI.



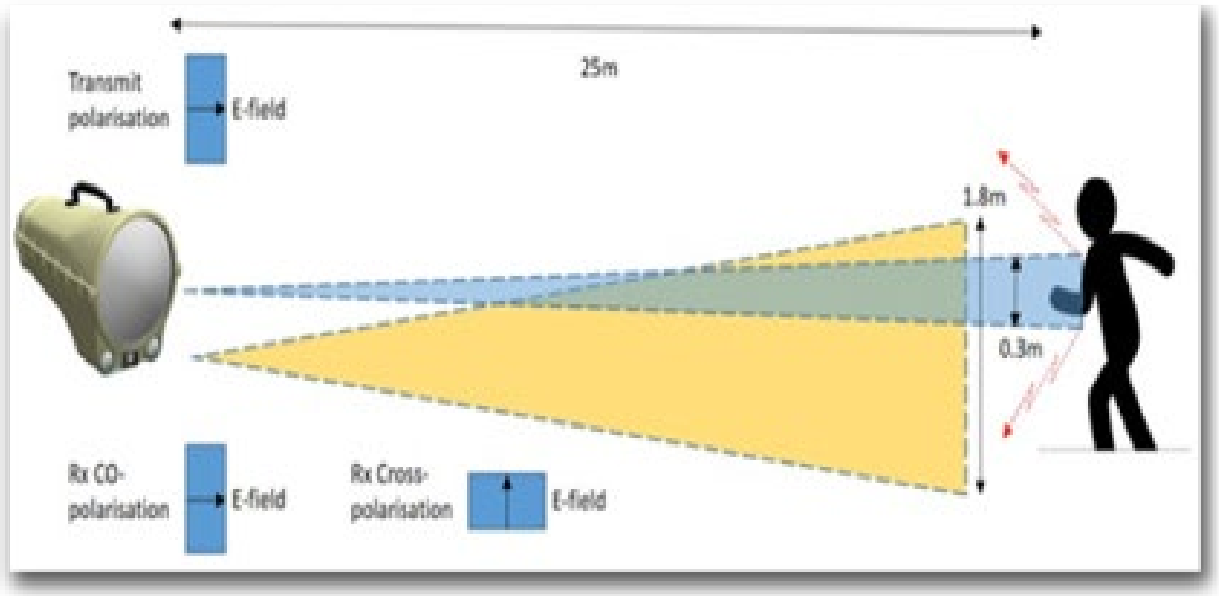


The Radio Physics' solution

Sensors that remotely detect concealed threats at a distance

Proprietary radio techniques

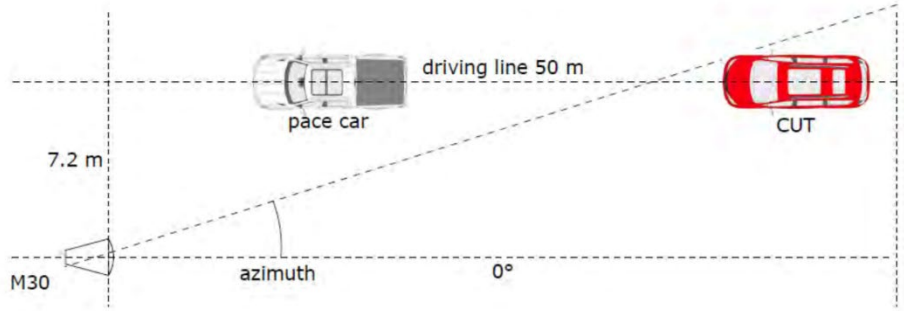
A transmit signal is automatically scanned over the body of a target



- Signals received back in 2 channels are processed and matched against references
- After multiple measurements in a short time, a Threat / No-Threat decision is made
- Threats from different weapons and explosive device types can be detected under clothing, when carried in different positions on the body

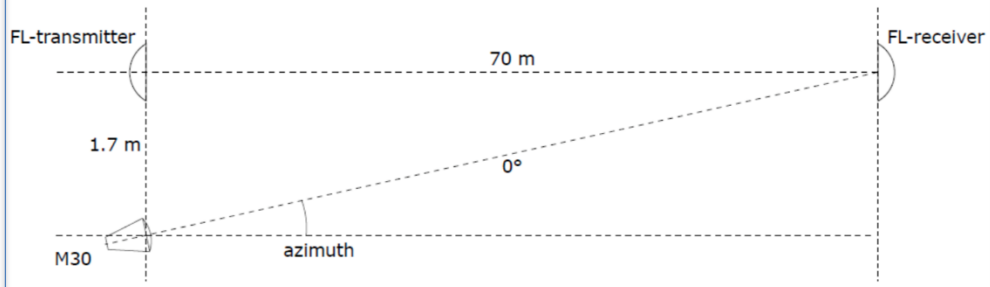
No interference with ACC or radio links

Test results at Micom Labs show no degradation of vehicular radar performance nor of millimeter-wave radio link performance



Speed:
- 19-20 mph
- 6-8 mph

M30 azimuth	Remarks
45°	No interference observed
30°	No interference observed
15°	No interference observed
10°	No interference observed
5°	No interference observed
3°	No interference observed
2°	No interference observed
1°	No interference observed
0°	No interference observed



M30 azimuth	FL BER	Remarks
45°	0	No interference observed
30°	0	No interference observed
15°	0	No interference observed
10°	0	No interference observed
5°	0	No interference observed
3°	0	No interference observed
2°	1.1×10^{-10}	Bit errors observed
1°	3.4×10^{-6}	Bit errors observed
0°	1.8×10^{-2}	Loss of FL- synchronization

Note: there will **never** be a MiRTLE installation that would be directly on the boresight of a millimeter wave link

Please Support this Waiver Request

Radio Physics - www.rpssys.com

By: Dr. Steve Clark, CTO
Date: 13-14 June, 2019